DOCUMENT RESUME

ED 093 483 PS 007 331

AUTHOR Young, Vivienne; Beich, Carol
TITLE Family Grouping.
INSTITUTION Toronto Board of Education (Ontario). Research Dept.,
PUB DATE Feb 74
NOTE 40p.; Report No. 121

EDRS PRICE MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS *Behavioral Science Research; *Class Organization; *Classroom Observation Techniques; *Cross Age Teaching; *Elementary School Students; Expressive Language; Interpersonal Relationship; Reading Achievement; Social Development; Teacher Attitudes; Teacher Role; Teaching Methods
IDENTIFIERS Vertical Grouping

ABSTRACT

This report describes an observational study of one family-grouped classroom, a system in which elementary school children remain with the same teacher for two or more years. The class was composed of junior kindergarten, senior kindergarten, and grade 1 pupils. Each child was observed over a period of one year. A detailed observation schedule, included in the report, was designed to record the types of activities each child engaged in, the level at which he worked, who initiated the activity, the role of the child, and the length of the activity. Group composition and the presence of the teacher or other adult were also recorded when applicable. A measure of reading achievement and a teacher rating of behavioral growth were also taken. The results of the study question some of the arguments for family grouping. It was found that little cross-grade grouping occurred spontaneously, and there were very few instances of older children teaching younger children. However, attention span was found to be high, no doubt due to the skill of the teacher in guiding and directing the work of the group. There were no differences in the reading achievement of graduates of this group and a control group, and the greatest behavioral growth was in the area of expressive language and social development. (Author/CS)

MAY 24 1974

PS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

FAMILY GROUPING

REPORT NO. 121

BEST COPY AVAILABLE

RESEARCH DEPARTMENT,
TORONTO BOARD
OF EDUCATION

V. Young
C. Reich

TSCD 00 C1

ED 093483

PS 007331

FAMILY GROUPING

Vivienne Young
Carol Reich

#121

February, 1974.

TABLE OF CONTENTS

	Page No.
INTRODUCTION	1
THE ISSUE	2
BACKGROUND RESEARCH AND LITERATURE	5
THE STUDY	7
METHOD	8
Classroom Observation	8
Reading Assessment	9
Teachers' Rating Questionnaire	9
RESULTS	11
Observation Schedule	11
Reading Achievement	24
Teachers' Rating Questionnaire	25
SUMMARY	26
REFERENCES	28
APPENDIX	31

BEST COPY AVAILABLE

INTRODUCTION

Family grouping is not new in primary education. In fact, it is reasonable to consider family grouping, as embodied in the "little red school house," as the original form of classroom organisation. Family grouping, as a new or reintroduced concept, is now almost a general practice in Britain, and has existed in some parts of the U.S.A. for up to twenty-five years.

The term "family grouping" is usually applied to a system of class organization in which elementary school children remain with one teacher for two or more years as they progress through two or more grade levels, with younger children introduced into the class every year. This results in each class having children of several ages. This system is sometimes referred to as the "vertical" method of grouping in contrast to the traditional "horizontal" method in which a child spends one year at each grade level with a new teacher every year.

This report describes a study of one particular family grouping classroom, in this case one composed of junior kindergarten (J.K.), senior kindergarten (S.K.), and grade one (GR.1) children. Other frequent groupings are: junior and senior kindergarten; grades one, two, and three; and grades four, five and six. However, within a family grouping classroom, grade divisions are fluid since any child can be working at any one of the developmental levels.

THE ISSUE

The proponents of family grouping feel that it offers the following advantages:

(1) Older children learn to accept responsibility by helping younger children.

(2) Younger children profit from the stimulation of working with older children and learning from them.

(3) The emphasis on co-operation and helping increases morale.

(4) Security and stability are fostered over the extended period of time a child spends in one classroom; a long term relationship between teacher and pupil can be established aiding the teacher in deepening her insight and understanding of each child and his family.

(5) Pupils have a greater acceptance of individual differences since they are in constant contact with children of different ages and abilities.

(6) The classroom provides flexibility to accommodate individual differences since equipment is available for work at all of the developmental levels covered by the age span of the children.

(7) Greater emphasis is placed on small group instruction, thus facilitating the teacher's assessment of each child's developmental level.

(8) Adjustment to school is eased both for the teacher and the incoming pupils. The teacher is able to enlist the help of the older children in familiarizing the newcomers with the everyday routines of preparing for, and cleaning up after activities and in helping her to sort and arrange equipment. This provides the older children with a valuable opportunity for social maturation. The newcomers benefit in their adjustment by entering a "classroom atmosphere already ordered and stable, with two thirds of the class fully established in the teacher's ways," (Ridgeway and Lawton, 1965, p. 17).

(9) The system results in a continuity of learning.

(10) Since mixed age groupings occur spontaneously outside of school, the family grouped classroom is a more natural environment.

(11) Since family grouped classrooms often use parent volunteers, a stronger tie between the school and the community can be established.

However, the system does not come snag free. The following are some of the problems:

(1) Qualified teachers with experience in teaching all grade levels to be included in the classroom are not always available.

(2) The teacher cannot use methods of instruction which focus on the total class. A great deal of teacher time and energy is required to work successfully with small groups and individuals, to plan a varied programme for individual children, and to keep track of each pupil's progress.

(3) The existence of pupil-teacher or pupil-pupil clashes in personality is much more serious when individuals remain together for more than one year.

(4) Costs for administration and supplies are greater since each classroom needs books and equipment to accommodate several grade levels.

(5) It is difficult to provide for the needs of the different age levels in some situations such as physical education or music.

In addition to these problems, several criticisms have been levelled against family grouping. It is felt by some that the younger children may indeed benefit from contact with older children but that they lack the intensive contact with the teacher which they would receive in a single age class. Since the older children are more demanding and assertive, and need stricter academic tutorship, they easily tend to monopolize the teacher's time. Others feel that the shoe is on the other foot, and that too much attention is focused on the

younger pupils with deleterious effects on the older group. A further criticism of the same genre is that the younger children are more likely to be engaged in loud, raucous play which disturbs the older ones engaged in more academic pursuits.

In a different vein, family grouping is sometimes criticized for placing undue pressure on the younger children to keep pace with the older ones. This is frequently a concern of the parents. Central to all these concerns is the issue of eventual academic achievement.

BACKGROUND RESEARCH AND LITERATURE

Unfortunately, there is little research on family grouping, making it difficult to answer the criticisms one way or the other. Only one longitudinal study has been done (Hamilton & Rehwoldt, 1957). This study is commendable because it includes a control sample of single grade classes. Seven classes of family groupings, both primary (GR.1, GR.2, GR.3) and intermediate (GR.4, GR.5, GR.6) units, were compared with eight single grade classes from the same school and twenty single grade classes from other schools. The purpose of the study was to analyse the effects of multigraded or family grouping on both scholastic achievement and non-cognitive areas of development. The data indicated that multigrade grouping increases both "the spread and speed of learning", (Hull, 1958). In academic achievement the experimental group exceeded the control in reading, arithmetic, and language. The experimental group also excelled in the areas of personality development, social adjustment, social maturity, and behavioural characteristics. Observations also indicated that the children in the multigraded units had developed a better attitude toward school and their peers.

Another study (Foshay, 1948) had very different results. In this case the control classroom gained more than the family grouping classrooms in academic achievement. However, children in the multigraded classes showed a greater tendency to accept other children as they were rather than setting expectations for them according to age. There were no significant differences in other areas: verbal behaviour, choice of friends, and use of time in the classroom.

Adams (1953) in his study found no significant differences between "combination" and "regular" classes on achievement in reading, arithmetic or language. Using a sociometric technique, he found a tendency for the "combination" classes to form spontaneous groups on the basis of sex and grade level. A later study by Finley and Thompson (1963) again found no significant differences in achievement of multigraded and single graded classes.

This was also true in a study by Chace (1961). However, Chace emphasizes the fact that family grouping had no deleterious effects on the class, and there was a slight advantage in personality and social development. Chace concluded that family grouping requires a different teaching style. To the extent that traditional practises are maintained, the benefits of family grouping are curtailed.

Since these studies appeared, two major works have been published, one in Great Britain and one in the U.S.A. Both are observational and anecdotal reports on the British Primary Schools, which nearly all use the family grouping system. Both are highly enthusiastic. For a more complete presentation of the arguments for and against family grouping, they are excellent sources. The first book is entitled Family Grouping in the Primary School by Lorna Ridgeway and Irene Lawton (1965); the second is Children Come First: the Inspired Work of English Primary Schools by Casey and Lisa Murrow (1971).

THE STUDY

This study of family grouping by the Research Department was undertaken at the request of the principal of Frankland Public School. A family grouping class begun in 1969 had graduated its first set of pupils after two years in the programme. The teacher had identified several areas in which she felt her pupils had benefited from the programme.

The Research Department agreed to initiate a study in this classroom to try and document these effects as well as to provide data relevant to some of the arguments for and against family grouping. Therefore, it was decided to:

(1) describe the interaction and activities that occur in family grouping at this level;

(2) measure the reading skills of the recent graduates;

(3) obtain data on the children's behavioural growth.

METHOD

Classroom Observation

There were forty-nine students in the family grouped classroom. Eight grade one pupils attended all day. Seventeen senior kindergarten, and twenty-four junior kindergarten children attended half days, either in the morning or the afternoon. These children were observed over a period of nine months with a controlled time sampling procedure. Each child was followed for one half day and each activity he engaged in was recorded according to an observation schedule devised for this study (see Appendix).

The observation schedule was designed to record the kinds of activities the children were involved in, the grade level at which they worked, how long an activity lasted, and whether or not the child chose the activity. Special attention was paid to the types of groupings in which the children worked and played, and whether or not the teacher had directed the group to work together. Since this classroom relied heavily on the lay assistant and parent helpers, we also noted the presence of these adults as well as the teacher in the groupings or with a child on a one to one basis.

The observations were made by one person who participated in the class and came to be well accepted by the children before the formal observations began. The participant observer tried to maintain a certain distance from the child she was recording; far enough away so as not to influence the child's play and yet close enough to hear the child's conversation. This was often very difficult to do since the children had accepted her as part of the class and very frequently tried to draw her into their activities.

In addition to the forty-nine sets of observations, the Research Department had another member observe about one quarter of the children concurrently so as to assess the inter-rater reliability of the observation schedule.

On all categories but one the level of agreement between the two observers on the number of instances of that category during the course of an observation period was 90 per cent or better. The one category with low agreement was subsequently eliminated from the analysis.

Reading Assessment

At the beginning of the school year the Gates-MacGinitie Primary Reading Test (Form B) was administered to the grade one students who had graduated from the family grouped classroom in the preceeding Spring and to an equal number of graduates of a non-grouped grade one class. All of these children were then in the same grade two classroom. This test was done in order to check whether or not those children in the family grouped classroom were advanced in their reading skills.

Teachers' Rating Questionnaire

A third instrument used was the Teachers' Rating Questionnaire developed by the Kindergarten and Research Departments of the Toronto Board of Education. The teacher was given a copy of this questionnaire and asked to rate each child in her class on a number of cognitive and non-cognitive items. This questionnaire has two forms, one to be used in the fall of the year, and one in June. On both the Fall and June questionnaire there are five general sections: Language, Social,

Emotional, Mental, and Physical Development, (Shroeder & Crawford, 1970). Although the questionnaire was devised for kindergarten children, it was used for both the juniors and seniors in this study with allowance made for the juniors in the analysis.

This instrument was very useful especially in measuring Social and Emotional growth, areas in which students are most frequently thought to benefit from family grouping. The Language section was also interesting since the class was predominantly New Canadian, and the teacher felt that one of the advantages of family grouping was a more rapid acquisition of English.

RESULTS

Observation Schedule

For the analysis of the observation schedule, we counted the number of times that each type of behaviour occurred and checked to see if there were any differences among the three grade levels. We also checked to see what different categories of activity tended to go together.

It is important to note that the data was analysed in terms of the number of times that a particular activity occurred, not the amount of time that the children spent in an activity. We did record the duration of activities, and data relevant to this question will be presented. However, the basic unit of analysis is the activity, not time.

First of all we will discuss what activities the children engaged in and who initiated them. Second we will discuss the composition of the work groups that occurred, who initiated them, and what types of activities occurred in the various groupings.

Type of Activity

Among the regular classroom activities, the largest number were Perceptual tasks (23 per cent). These included such things as visual or auditory discrimination games, puzzles, connector toys, and music time activities, activities which are generally regarded as developing reading readiness.

The next largest concentration of activities was in the Reading category (13 per cent of all activities). Here we found large differences by grade.[1] Only eight per cent of the J.K. activities were classified

---

1 Activity by grade Chi-square = 23.36, $p < .05$

as reading, 13 per cent of the S.K.'s and 26 per cent of GR.1's. We also noticed that what constitutes a reading activity differed by grade. For J.K.s, reading consisted mainly of such things as listening to a tape recorded book and following the printed version. For S.K.s, reading included attending to print as they turned pages in a book or practising sight vocabulary with an adult. Reading activities for GR.1s more closely followed the common sense meaning of the term, i.e. concentrating on a book, attending to the pages in sequence, and decoding and comprehending the written symbols.

TABLE 1

PER CENT OF ACTIVITIES OF EACH TYPE BY GRADE

Activities	Grade			Overall
	J.K. (n=229)	S.K. (n=176)	GR.1 (n=82)	(n=487)
Math	3	6	1	4
Art	7	9	6	8
Perceptual	25	24	16	23
Play	11	7	6	8
Reading	8	13	26	13
Miscellaneous	46	41	45	44
TOTAL	100	100	100	100

Chi square = 23.3608, $p < .05$

All other regular classroom activities were relatively rare. Art was the next most frequent category and included a wide range of creative activities like painting, cut and paste work and papier mache. Play occurred quite often among J.K.s (11 per cent), although it accounted for seven per cent over all three grades. For the youngest children play is very important, since activity in the doll center, in the sand box and with water stimulates the use of English. It must be remembered that the majority of J.K.s were non-English-speaking.

Math activities accounted for only four per cent of the observations. Activities such as number games, board games with dice, and simple arithmetic were coded as math.

Almost half of the activities fell into a category which we labelled miscellaneous (45 per cent). This included such things as a group assembly to listen to the school choir, special visitors to the classroom, and gym. However, it also included routine maintenance activities such as juice time, removing outer clothes upon entering the classroom, and putting away toys and equipment. One routine activity was especially important in this particular classroom. Twice each morning and afternoon the children gathered around the teacher to decide what activity they would do next. Each child was called upon to say what he wanted to do. If the teacher considered his suggestion viable in terms of the individual's developmental level, his previous activities and the equipment available in the room, the child could go ahead. If the child didn't know what to do or came up with an inappropriate suggestion, the teacher usually gave him a series of options from which to choose. On rare occasions the teacher would direct him to a particular activity.

Unfortunately we are unable to give separate figures for these three classes of Miscellaneous activities since their importance did not emerge until well into the observation series. However, we can estimate that true miscellaneous activities account for 20 per cent of all Miscellaneous activities or 10 per cent of the total.[2] Maintenance activities accounted for 50 per cent of all Miscellaneous activities or about 25 per cent of the total, while decision-making accounted for 30 per cent of Miscellaneous or roughly 15 per cent of the total. Thus, true maintenance and decision-making are in the same range of occurrence as Perceptual and Reading, the two most frequent type of academic activities.

These decision-making sessions were also crucial in determining the initiation of an activity as well as its type. However, not all activities were initiated in this setting since students typically engaged in more than two activities during the course of a morning or afternoon. The average number of activities recorded for each child was in fact ten, however one child worked on only six activities while another managed to engage in seventeen different activities during the period in which he was observed.

Initiation of Activities

The largest number of activities were completely initiated by an adult (61 per cent). However, most of these were in the Miscellaneous category (where 94 per cent of the activities were adult initiated), although 53 per cent of all Perceptual activities, and 31 per cent of all Reading activities were initiated by the teacher, the lay assistant, or a parent, who directed the child to engage in the particular task.

---

2 Activities were also coded as "structured" or "unstructured". Without going into our use of these terms, it can be noted that true miscellaneous activities were always unstructured while the remaining two types were mainly structured. Thus it is by noting the coincidence of these two dimensions that our estimates can be made.

A separate category was used when the teacher or any one of the adults in the classroom offered the child a set of activities from which he could choose. This occurred in only an additional nine per cent of all activities, but was very important in the selection of Reading; 42 per cent of all Reading activities were initiated in this way. Together, adult complete and adult partial initiation occurred in 70 per cent of all activities.

Of the number of activities, 25 per cent were initiated by the child who was being observed or by another child with whom he was working. Not surprisingly, child initiation was especially predominant in Play (68 per cent) activities. However 61 per cent of all Math activities were child initiated, although this is of questionable importance since Math activities were relatively infrequent. More than half (53 per cent) of all Art activities were child initiated; 33 per cent of Perceptual activities, and 26 per cent of all Reading activities were child initiated. Thus, although the majority of child initiated activities are in what might be called non-academic areas, there is a substantial interest shown in academic activities as well.

The remaining five per cent of the activities were initiated by a child, with the child being subsequently told by the teacher or an adult not to engage in that activity. This was especially frequent in Play activities where 24 per cent were classified as "Adult Rejected."

TABLE 2

INITIATION OF ACTIVITIES EXPRESSED AS A PERCENTAGE

Activities	Self or Peer	Adult Partial	Adult Complete	Adult Rejected	Total
Math (n=18)	61	6	28	6	100
Art (n=38)	53	21	18	8	100
Perceptual (n=112)	33	7	53	7	100
Play (n=41)	68	0	7	24	100
Reading (n=62)	26	42	31	2	100
Miscellaneous (n=216)	4	1	94%	1%	100
Total (n=487)	25	9%	61%	5	100

Attention Span

This material on initiation is especially meaningful in light of the data on length of activities, which we shall call attention span. The first observation we made was that attention span was much longer than we had expected. The literature on the subject varies. Van Alstyne (1932), found an average attention span of 12.4 minutes for four-year-olds and 13.6 minutes for five-year-olds. One study (Herring and Koch, 1930) reported an attention span for four-year-olds ranging from 1 1/2 to 2 1/2 minutes. Another more recent study by Moyer and Gilmer (1955) recorded an attention span for four-year-olds of from 22.7 to 39.2 minutes, depending on the complexity of the toy played with. Several authors

point out that the setting and the type of activity are decisive in the measurement of attention span. Bertrand (1925) found an average attention span of 25 minutes for five-year-olds when they were allowed to choose what game or toy to play with. The majority of research describes four, five, and six-year-olds as having an attention span of under ten minutes.[3]

In this classroom, active and bustling, the average length of time spent on an activity was 17.6 minutes. Furthermore, there were no significant differences among the three grades, a finding which is also surprising.

There were, however, differences by initiation.[4] Overall attention span for child initiated and adult partial initiated activities was much longer than the attention span for activities completely initiated by an adult (19.5 and 19.7 vs. 12.9 minutes, see Figure 1). These results shed light on the other studies in the literature, where the low attention spans are probably due to the highly structured and coercive nature of the experimental setting. It is important to note that in Van Alstyne's study, in which the child was free to choose his own materials the reported attention span approximates what we found for adult initiated activities. The longer attention spans of our children under these conditions may be due to their greater familiarity with the classroom or to the skill of their teacher.

---

3 For a comprehensive research review see: Moyer, K. E., & Gilmer, B. V. H. Attention spans of children for experimentally designed toys. Journal of Genetic Psychology, 1955, 87, pp. 187-201.

4 Because of unequal cell sizes the ANOVA method of least squares with Doolittle's algorithm was used. $F(2,452) = 19.94$ $p < .01$.

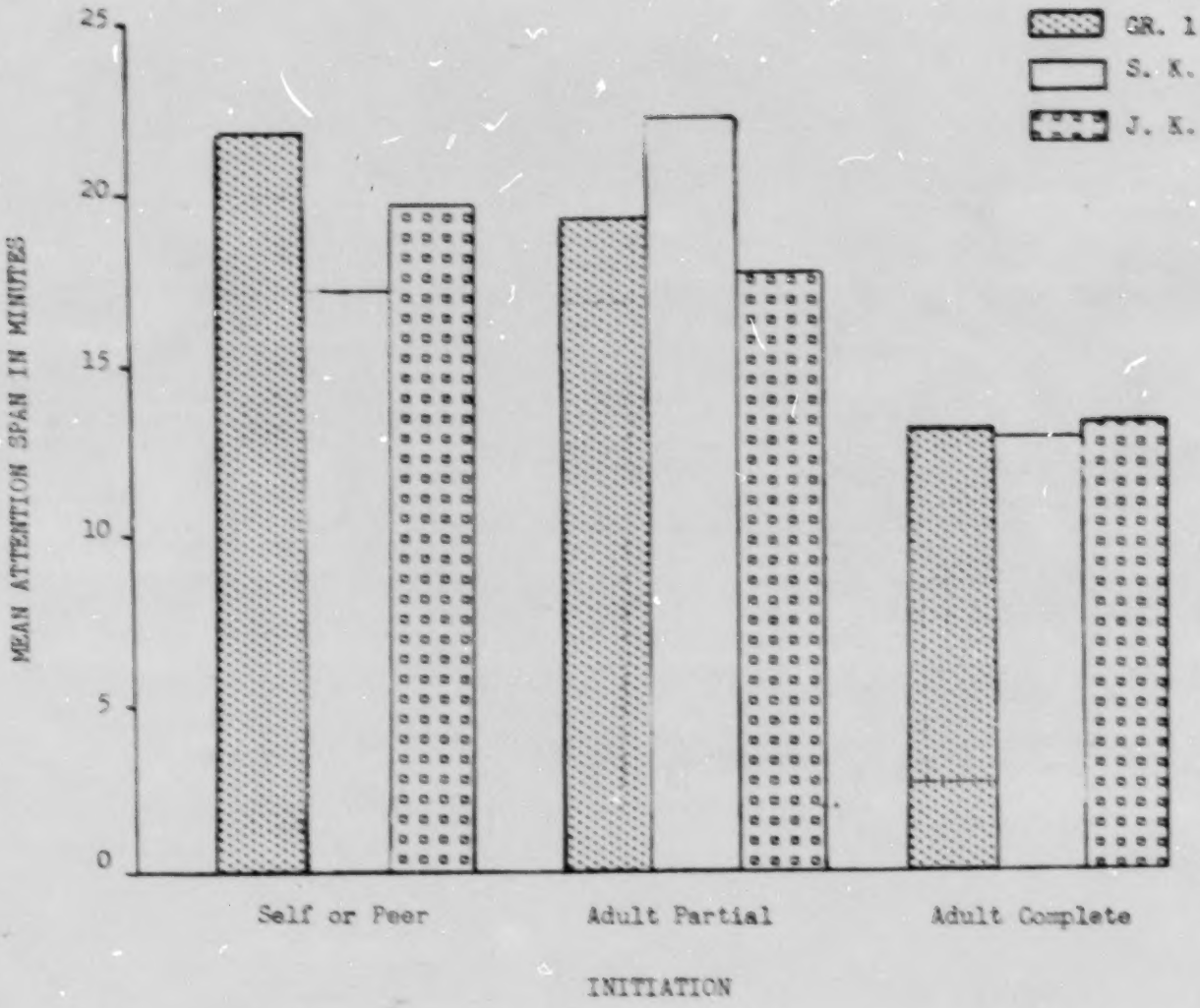


Fig. 1. Comparison of mean attention spans by initiation at each grade level.

Attention spans also varied by activity.[5] The highest was for Art (27.9 minutes), followed by Play (25.2 minutes). Reading (15.4 minutes) and Math (15.0 minutes) have similiar attention spans, as do Perceptual (12.5 minutes) and Miscellaneous (12.7 minutes). Although there were no differences by grade, it must be remembered that the same general activity category was often composed of different specific activities at the different grade levels. Thus, although S.K.'s and GR. 1 children all spent an average of 15 minutes on a reading activity, they were doing different things during that period of time.

TABLE 3

MEAN ATTENTION SPAN FOR VARIOUS ACTIVITIES

Activity	Number of Activities [a]	Attention Span (in minutes)
Math	17	15.0
Art	35	27.9
Perceptual	104	12.5
Play	31	25.2
Reading	61	15.4
Miscellaneous	213	12.7
Total	461	17.6

a Adult rejected activities are not included

Activity Level

One of the reasons for encouraging self initiated activity is that it allows a child to seek his own level, whether higher, lower or what would generally be expected for his age. We attempted to discover to what extent this actually occurred by coding at what grade level various activities were performed. From knowledge of the classroom

5 $F(5,443) = 21.63$ $p < .01$

programme and discussions with the teacher, we attempted to determine the grade level for which the various tasks and materials were intended. Then, when recording that a child was engaged in a Reading or a Math or an Art activity, it should have been possible to record whether he was working at a J.K., an S.K., or a GR.1 level.

However, we do not have a great deal of confidence in these judgements. For one thing, it was often difficult to decide exactly what skills a child was using in an activity. For example, there are jigsaw puzzles available at all three levels, and it was sometimes difficult to decide how complex a particular puzzle was. It is also possible for children to do very complex things with simple materials as well as simple things with complex materials. For example a GR. 1 and a J.K. child might both be playing with blocks, the one constructing a post office complete with labels, stamps, and sorting boxes, and the other building a simple tower. The observer also felt that the children tended not to choose challenging activities during the time they were under observation so that they would appear to be doing well.

Thus, the data showing that virtually all activities occurred at the child's own grade level (92 per cent) should be interpreted with caution. About all we can say is that we failed to find evidence of this type of grade crossing; however, we are not really willing to say that it does not occur.

Type of Grouping

The obvious advantage of family grouping in the classroom is that it allows children of different ages to work together.

In nine per cent of the activities observed, the children were working alone. In all other cases they were working with at least one other child, with or without the presence of an adult. In about

14 per cent of the cases the other child or children were from their own age group. Thus, there remains about 77 per cent of the observations in which multi-age groupings occurred. Most of these (59 per cent of all observations) were GR.1 - S.K.-J.K. groups. However, these were generally not voluntary. Almost all of these groupings were directed by the teacher, and the teacher or another adult was present in most of them. This does not demean the opportunity for multi-age grouping in such a classroom, but merely points out that it does not occur spontaneously.

TABLE 4

PER CENT OF ACTIVITIES OCCURRING IN VARIOUS GROUPINGS BY GRADE

		J.K. (n=222)	S.K. (n=164)	GR. 1 (n=82)	Overall (n=468)a
Unmixed	J.K.	13			14
	S.K.		13		
	GR. 1			18	
Mixed	GR. 1 - S.K.		6	12	77
	GR. 1 - J.K.	2		4	
	S.K. - J.K.	15	15		
	GR.1 - S.K. - J.K.	59	59	59	
	Child Alone	11	7	7	9
Total		100	100	100	100

a Adult rejected activities, where no grouping formed, are not included.

The other mixed groupings were most frequently between J.K. and S.K. children; S.K.s more rarely worked with GR. 1, and the incidence

of J.K.-GR. 1 groupings was very low. Thus, 15 per cent of the observations on J.K.s found them working with S.K.s in only two per cent of their activities were J.K.s working with GR. 1 students. S.K.s likewise worked with J.K.s in 15 per cent of their activities, but with GR.1s on only six per cent. GR.1 students were observed working with S.K.s in 12 per cent of their activities, but with J.K.s in only four per cent. However, these bi-grade groupings were usually voluntary, and adults were rarely present. Thus, they do indicate some limited interest among the children in crossing age lines.

Different groupings tended to predominate in different activities (see Table 5). Groupings of GR. 1 children alone were more often engaged in a Reading activity than anything else (60 per cent of all such groupings), while close to half of the S.K. (41 per cent) and J.K. (48 per cent) groupings were working on the Perceptual activities preparatory to reading. Many of the activities in which a child was working alone were Reading (52 per cent) or Perceptual (24 per cent) activities.

TABLE 5

PER CENT OF EACH TYPE OF ACTIVITY OCCURRING IN VARIOUS GROUPINGS

Activities (n=466)a	Unmixed			Mixed				Child Alone (n=42)
	GR1 (n=15)	SK (n=22)	JK (n=29)	GR1-SK (n=20)	GR1-JK (n=8)	SK-JK (n=58)	GR1-SK-JK (n=274)	
Math	7	23	3	0	13	12	1	0
Art	0	14	7	15	25	14	5	7
Perceptual	13	41	48	20	25	28	19	24
Play	7	9	28	20	13	21	0	7
Reading	60	14	14	20	25	19	2	52
Miscellaneous	13	0	0	25	0	7	73	10
TOTAL	100	100	100	100	100	100	100	100

a Adult rejected activities in which a group did not form are not included.

It is interesting to look at the clustering of activities for the total mixed group -- GR.1 - S.K. - J.K. In 73 per cent of this type of grouping, the children were observed in Miscellaneous activities, while another 19 per cent were Perceptual. It is significant that none of these GR. 1 - S.K. - J.K. groups were engaged in Play. Since Play activities were almost always child initiated, this underscores the fact, noted above, that tri-age groupings are not usually spontaneous. Also important in considering the value of family grouping is that relatively few instances occurred in which children of two different ages worked on academic material i.e. Math, Perceptual, and Reading activities.

Role

When children were working with another child or with an adult we also recorded what "role" he played in the interaction. There were three possibilities: the child playing the role of teacher to the group, the child playing the role of pupil to someone else's teaching, and the child acting as a peer to those with whom he was involved.

Children from all three grades were predominantly observed as peers (approximately 75 per cent). About 15 per cent of the time they were in a pupil role. This sometimes involved children older than themselves and sometimes children who were younger. However, GR. 1 children never acted as pupil to J.K.s, although they did on occasion to S.K.s. There were few recorded instances of children acting as teacher to other children. Where this did occur, it was always to younger children: i.e. GR. 1 to S.K. and J.K., and S.K. to J.K.

This brings us to the role of the teacher in this classroom. Looking at whether or not the teacher was present at the various groupings,

(including children working alone) we note that 71 per cent of the groups in which the teacher was present were the GR. 1 - S.K. - J.K. groups. Other groupings were more frequently attended by the lay assistant or another adult in the classroom. The teacher did spend some time with GR.1 groupings or GR. 1 - S.K. and GR. 1 - J.K. groupings, although not a great deal. And with the exception of the GR. 1 - S.K. - J.K. group, most groupings worked without an adult.

Thus, the picture that emerges of the teacher in the classroom is that of an organizer and guide of a child's activities rather than a direct teacher of the child herself. Thus, this classroom is oriented towards a child's learning directly from his own experience and the experience of other children rather than vicariously from an adult. The adult functions to guide the selection of experiences.

Reading Achievement

There were no significant differences in reading achievement between the graduates of the family grouped and the non-family grouped classroom when tested in September upon entering grade two.[6] On both vocabulary and comprehension both classes scored at the 2.1 level. However, it should be noted that the non-grouped class was, on the average, five months older than the children coming from the family grouped classroom.

The reading test administered in the spring to the grade one children who were leaving the programme after three years showed a mean level vocabulary score of 2.1. Comprehension stood at 3.0. However, no control group was tested for comparison and testing conditions were optimum.

---

6 vocabulary t= .06 n.s.
comprehension t=1.12 n.s.

Teachers' Rating Questionnaire

For S.K.s, there were no significant gains betwen the Fall and Spring on the Language and Social sections of the questionnaire. There were positive gains in the Emotional, Mental and Physical areas over the year.[7] J.K.s however showed positive gains in all areas.[8]

Without a control group, this data cannot really tell us whether a family grouped classroom is better or worse than a traditionally organized class. However, it is reassuring to note that the J.K. class made gains in each area over the course of the year. The fact that the S.K.s did not advance in some areas is difficult to interpret. It may mean that the classroom was not meeting their needs for language and social development. However, there is a certain amount of relativity in the scale by which individual students are rated in comparison to their other classmates. Thus, a failure on the part of the class as a whole to show a gain over the course of a year may mean that they all advanced at about the same rate.

---

7 emotional $t=2.475$ $p<.05$
mental $t=3.2522$ $p<.01$
physical $t=2.437$ $p<.05$

8 language $t=4.7214$ $p<.001$
social $t=5.5371$ $p<.001$
emotional $t=8.4936$ $p<.001$
mental $t=10.1910$ $p<.001$
physical $t=6.3967$ $p<.001$

SUMMARY

Family grouping is a system of classroom organization in which elementary school children remain with the same teacher for two or more years. There are thus several ages in the class. Family grouping has its proponents and opponents. A study was conducted of one family grouping class in order to answer some of the questions that have been raised about this system.

The classroom was observed over a period of a year in order to record the behaviour of the children. Among the regular classroom activities, Perceptual (i.e. reading readiness) and Reading tasks occurred with the greatest frequency. All other types of activities were relatively rare, except for a large category of true miscellaneous (e.g. assembly, gym), routine maintenance, and classroom organization activities.

Most activities in the classroom occurred at the direction of an adult (70 per cent). However, a large number (25 per cent) were child initiated. In some categories the figure went even higher. Some of these are not surprising, e.g. Play (68 per cent). However large numbers of the academic activities were also child initiated, e.g., Reading (26 per cent).

Attention span in the classroom was quite high, an average of 17.6 minutes. Attention span was particularly high when a child chose his own activity (19.5) as compared to when it was adult directed (12.9). Thus, although child initiated activities occur less frequently than ones directed by an adult, they have a disproportionate educational significance.

One of the supposed advantages of family grouping is that it allows a child to work at his own level, either below or above what would

be expected for his age. We found little evidence that this occurs, although there are problems with this part of the data. A second hoped for advantage of family grouping is that it allows children of different ages to work together. Although we found this occurring to a great extent (77 per cent of activities), it did not usually occur spontaneously. We also did not find many instances of children teaching other children. Thus, in order to realize this advantage of family grouping, direct intervention of the teacher is necessary.

The activity of the teacher is apparent throughout the class, although she does not function in a traditional manner. There is little large group instruction, even relatively little direct instruction of children in small groups or individually. Rather the teacher's role is to organize and guide the child's own activity and to help him select workmates with whom he can learn.

REFERENCES

Adams, J. J. Achievement and social adjustment of pupils in combination classes enrolling pupils of more than one grade level. Journal of Educational Research, October, 1953, pp. 151-154.

Bertrand, F. L. Contribution a' l'etude psychogenetique de l'attention. Annee Psychol., 1925, 26, pp. 155-158. Cited by K. E. Moyer & B. Von Haller Gilmer, Attention spans of children for experimentally designed toys. Journal of Genetic Psychology, 1955, 87, pp. 187-201.

Chace, E. S. An analysis of some effects of multiple-grade grouping in an elementary school. Unpublished doctoral dissertation, University of Tennessee, 1961. University Microfilms Inc. # 61-6725.

Finley, C. J., & Thompson, J. M. A comparison of multi-graded and single-graded rural elementary school children. Journal of Educational Research, 1963, 56, pp. 471-475.

Foshay, A. W. Interage grouping in the elementary school. Unpublished Doctoral Thesis, Teachers College, Columbia University, New York, 1948. Cited by E. S. Chace, An analysis of some effects of multiple-grade grouping in an elementary school. Unpublished doctoral dissertation, University of Tennessee, 1961. University Microfilms Inc. # 61-6725.

Hamilton, W., & Rehwoldt, W. By their differences they learn. National Elementary Principal, 1957, 37, pp. 27-29.

Herring, A., & Koch, H. L. A study of some factors influencing the interest span of preschool children. Journal of Genetic Psychology, 1930, 38, pp. 249-279. Cited by K. E. Moyer & B. Von Haller Gilmer, Attention spans of children for experimentally designed toys. Journal of Genetic Psychology, 1955, 87, pp. 187-201.

Hull, J. H. Three year study shows value of multigrade teaching. The Nation's Schools, July, 1958, pp. 35-40.

Moyer, K. E., & Von Haller Gilmer, B. Attention spans of children for experimentally designed toys. Journal of Genetic Psychology, 1955, 87, pp. 187-201.

Murrow, C. & Murrow, L. Children come first -- the inspired work of English primary schools. Toronto: McGraw-Hill Company of Canada, Ltd., 1971.

Ridgeway, L., & Lawton, I. Family grouping in the primary school. London: Redwood Press Ltd., 1965.

Schroeder, C., & Crawford, P. School achievement as measured by teacher ratings and standardized achievement tests. Toronto: Board of Education for the City of Toronto, Research Department, 1970, #89.

Van Alstyne, D. Play behaviour and choice of play materials of preschool children. Chicago University, Chicago Press, 1932. In K. E. Moyer & B. Von Haller Gilmer, Attention spans of children for experimentally designed toys. Journal of Genetic Psychology, 1955, 87, pp. 187-201.

Additional relevant reading materials in preparation for this report are:

Carlson, W. H. Interage grouping. Educational Leadership, March 1958, pp. 263-268.

Ching, D. C. The teaching of reading in kindergarten. California Journal of Educational Research, 1972, 23 (4), pp. 156-162.

Fox, R., Luszki, M., & Schmuck, R. Diagnosing classroom learning environments. One of a series entitled: Teacher resource booklets on classroom social relations and learning. Chicago: Science Research Associates Inc., 1966.

Franklin, M. P. Multigrading in elementary education. Childhood Education, May, 1967, pp. 513-515.

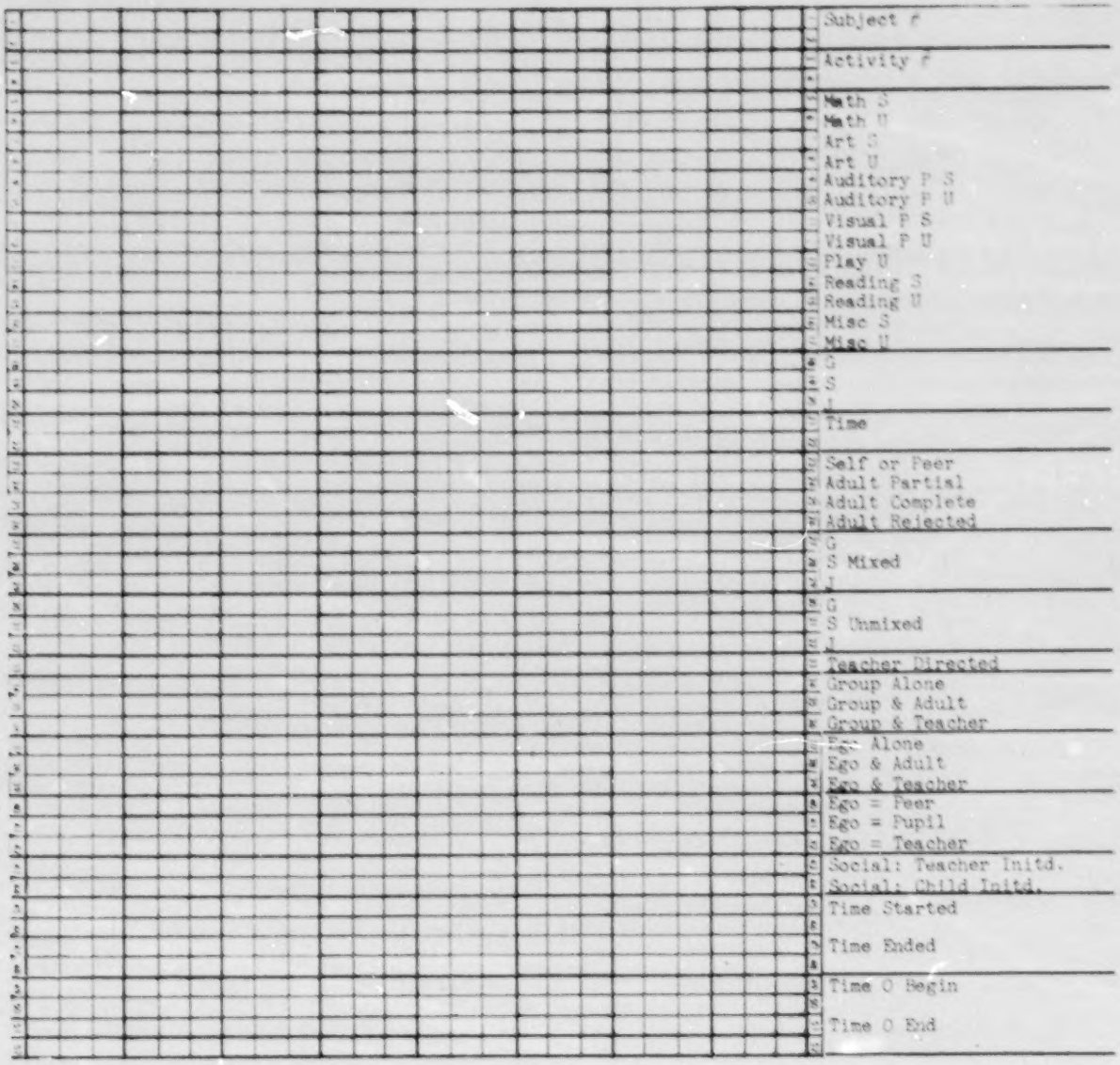
Johnson, R., & Medinnus, G. R. Child Psychology. New York: John Wiley & Sons, Inc., 1965.

King, E. M., & Friessen, D. T. Children who read in kindergarten. Alberta Journal of Educational Research, 1972, 18 (3), pp. 147-161.

Tewksbury, J. L. Nongrading in the elementary school. Columbus, Ohio: Charles E. Merrill Inc. Books, 1967.

Webb, J. N., & Brown, B. B. The effects of training observers of classroom behaviour. The Journal of Teacher Education, 1970, 21 (2), pp. 197-202.

Wettlaufer, M., et al. Children's World - Holt's Early Childhood Program. New York: Holt, Rinehart and Winston, 1968.



SUBJECT: _____

DATE: __/__/__ DAY: ____ TIME: ____

COMMENTS: _____

_____

_____

_____

APPENDIX

Each child in the classroom was observed for one half day using a record sheet, a copy of which appears on the facing page. Each activity in which the child engaged was coded on a separate row. The columns indicate the codes and each code which applied to the activity was checked. A detailed description of the coding scheme follows.

Columns 1 - 2
Subject number

The number of the child being observed, assigned sequentially from 1 to 49.

Columns 3 - 4
Activity number

The number of the activity in which he was engaged at that point in time. Activities were numbered sequentially as 1, 2, 3, ... n.

Columns 5 - 17
Activities
(Select only one of the following)

Each of these columns indicates a different type of activity and whether it was structured (S) or unstructured (U). A structured activity is one which requires little input from the child. The materials constitute a set of stimuli which are designed to elicit particular responses; there is an objective, correct response. An unstructured activity is one in which either the child is providing his own input, or the materials used have no set pattern of responses. An example would be the child working at a cut and paste center.

The six general categories were derived from an inventory of the materials and equipment in the class.

Column 5
Math S

- Child is working with materials designed to teach basic principles of arithmetic. e.g. Addo game.

For the younger children this code referred to counting and sorting activities, dominoes, and board games which use dice. Learning to count and recognize numbers would also be coded as Math activities for the youngest children.

Column 6
Math U - Any activity in which a child informally uses arithmetic or counting, although the materials were not primarily designed for this purpose, e.g. counting wooden blocks. This code was also used when a child worked with structured Math materials in a fashion not originally intended, for example, using dominoes as building pieces.

Column 7
Art S - Any creative project where a child has to follow directions and use materials in a certain manner to achieve a desired result, e.g. making a papier mâché mask.

Column 8
Art U - Any creative activity in which child provides his own structure. This includes painting, cutting and pasting, and making three dimensional sculptures.

Column 9
Auditory Perceptual S - Any activity in which the child is required to listen to a set of stimuli. For older children, games using initial consonants of words was coded this way. For the younger children, shaker toys (child has to guess contents of box or jar after listening to its rattle) and identifying everyday sounds were included in this category. Music, singing and all forms of rhythm work, like imitating a clap pattern, are examples of this category which occurred in all age groups.

Column 10
Auditory Perceptual U - Any activity in which the child is using the materials and equipment designed for auditory discrimination in a way not originally intended; or an auditory activity in which the child makes up his own rhythm patterns, or songs.

Column 11
Visual Perceptual S

- Any activity in which the child relies on his sight skills to work with materials. Visual discrimination games and puzzles were included in this category. Matching and sorting by colour and shape or by fine details occurred at all grade levels. Letter recognition games and pictures, with word matching sets were used by the older children.

Column 12
Visual Perceptual U

- Any activity which involves the use of visual materials in a creative way, for example, using jig-saw pieces to make patterns.

Note: For purposes of analyses, the previous four categories were collapsed into two categories with the more general label of Perceptual S or U.

Column 13
Play U

- This activity was only coded in an unstructured mode since we felt the input of the play activity was totally the child's. These activities included time spent at the sand box, with the water tank, in the doll center, with the blocks and fantasy with the dress-up clothes.

Column 14
Reading S

- Any activity in which the material used was a book or other type of printed matter. This category designated markedly different kinds of activities at the three grade levels. For the J.K.s, attending to printed matter was coded this way; for the S.K.s the category included a range of activities from attending sequentially to printed matter and increasing their sight vocabulary to actual pre-primer reading texts and printing words. The GR. 1 children were all reading in the curriculum texts. Their reading activities were the most extensive, and ranged from reading aloud, to printing stories, to using related work sheets to test for comprehension.

Column 15
Reading U - Any activity which involved the use of printed words in an informal way. Pretending to read while holding a book and telling a story are examples.

Column 16
Miscellaneous S - Any routine activity in which the child had specific instructions to follow. Putting away toys and cleaning up after an activity period as well as routines such as gathering around for juice time were included. Also coded in this category was the regular practise of gathering around the teacher for decision making.

Column 17
Miscellaneous U - Any activity of infrequent occurrence which did not readily fit into the previous categories e.g. gym, choir visit and visitors such such as the fireman.

Columns 18 - 20
Level of Activity
(Select one of the following)

Column 18 G - Coded when child, regardless of his grade level, was successfully working with materials intended for a GR. 1 level.

Column 19 S - Coded when child was working with S.K. materials.

Column 20 J - Coded when child was working with J.K. materials.

Columns 21 - 22
Duration of Activity - Total time in minutes, in which the child is engaged in an activity. (Calculated at completion of observation period.)

Columns 23 - 26
Initiation
(Select one of the following)

Column 23
Self or Peer - Child under observation or a friend with whom he is working, initiates an activity.

Column 24
Adult Partial - Coded when teacher or adult gives a set of alternative activities from which the child can choose.

Column 25
Adult Complete - Coded when teacher or adult chooses an activity for the child.

Column 26
Adult Rejected - Coded when the child suggests and activity to the teacher or adult and it is rejected.

Columns 27 - 32
Group Composition
(Use only if child is working with other children)

Columns 27 - 29
Mixed Group
(Select all columns which are applicable).

Column 27 GR. 1 - Group includes Grade 1 children as well as others.

Column 28 S.K. - Group includes S.K. children as well as others.

Column 29 J.K. - Group includes J.K. children as well as others.

Columns 30 - 32
Unmixed Group
(Select one of the following)

Column 30 GR. 1 - Group includes Grade 1 children only.

Column 31 S.K. - Group includes S.K. children only.

Column 32 J.K. - Group includes J.K. children only.

Column 33
Teacher Directed - Coded when composition of the group is determined by the teacher.

Columns 34 - 36
Presence of Adult in Group
(Select one of the following)

Column 34 - Coded when group is working on activity without adult or teacher present.

Column 35 - Coded when group has an adult present other than the teacher.

Column 36 - Coded when teacher is present with the group.

Columns 37 - 39
Presence of Teacher with Child Working Alone
(Select one of the following, if child working alone)

Column 37 - Child is working without adult supervision or participation.

Column 38 - Child is working with an adult other than the teacher.

Column 39 - Child is working directly with the teacher.

Columns 40 - 42
Role of the Child
(Select one of the following, if the child is working in a group or with the teacher)

Each of these columns indicate the established role of a child in a group composition or his relation to an adult or the teacher. This decision is made at the end of the time spent on an activity based on the role the child played for the majority of the time.

Column 40
Ego = Peer - Child is working with other children or with an adult on an activity in which no role differentiation takes place. For example, routine activities like getting juice.

Column 41
Ego = Pupil - Child in group activity or in working with an adult is being taught by a group member or by an adult.

Column 42
Ego = Teacher - Child is teaching another child or an adult or the teacher.

Columns 43 - 44
Social Interaction
(Use if social interaction occurs)

These columns indicate a verbal social interchange between the child being observed and the teacher. These interactions are of a personal and reinforcing nature, not directive, as in the decision making sessions. They are coded within any activity if such an interchange occurs. The initiation of social interaction indicates the source i.e. from the teacher or from the child.

Column 43
Teacher Initiated

- Teacher makes a social comment to the child under observation, e.g., teacher, in trying to promote language of a New Canadian child, engages in conversation about a toy that the child brought from home.

Column 44
Child Initiated

- Child approaches the teacher with a comment of a social nature, e.g. child tells the teacher about a hockey game he had been to with his parents.

Columns 45 - 48
Length of Activity

Columns 45 - 46
Beginning Time

- The outset time was taken to be the time of initiation, i.e., the time at which the child expressed his wishes, or was directed by an adult to some activity.

Columns 47 - 48
Completion Time

- The end of the activity was marked by the completion of the cleaning up process, or, if the child neglected this routine, by the initiation of a new activity.

These columns were not keypunched. Calculations of the total time in minutes of each activity were made at the end of an observation period, and inserted in columns 21 and 22.

Columns 49 - 52
Length of Observation

Columns 49 - 50
(Entered Once)

- Exact time of beginning of observation period.

Columns 51 - 52
(Entered Once)

- Exact time of end of observation period.

These columns were not keypunched. However, a calculation of the total time of observation compared to the sum of all the activities duration gave an indication of the amount of time a child spent completely inactive, i.e., between activities.